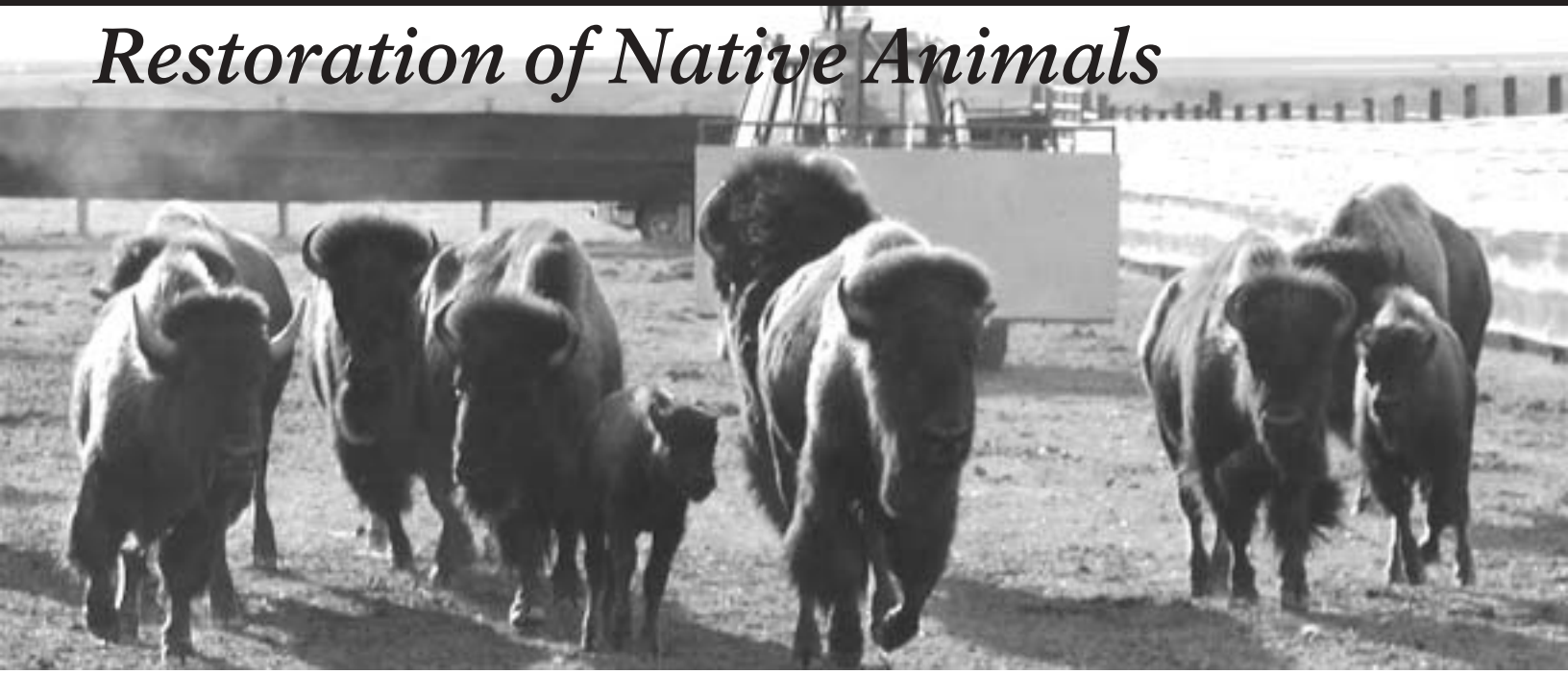
Badlands

Badlands National Park
South Dakota

Restoration of Native Animals



If the biota, in the course of aeons, has built something we like but do not understand, then who but a fool would discard seemingly useless parts? …to keep every cog and wheel is the first precaution of intelligent tinkering. -Aldo Leopold

A Loss Unpredicted

The scenery stretching out in front of you during a visit to Badlands National Park supports a unique web of living and nonliving components known as an ecosystem. This system is delicate and highly sensitive to modifications; when a small portion of an ecosystem is removed, the entirety is affected in some manner. As the United States expanded westward, a variety of wild animals were forced out of their native habitat - like the mixed grass prairie of the Badlands.

It is the mission, in part, of all units of the National Park Service *to preserve unimpaired the natural and cultural resources and values of the national park system for the enjoyment, education, and inspiration of this and future generations.* In order to protect the plants and animals of the national parks, it is often crucial that we restore missing components of the ecosystem.

A Case Study: *The Wolves of Yellowstone*

After much debate, the first U.S. national park, Yellowstone National Park, brought wolves back in 1995 after nearly a century of absence. Positive effects have since cascaded through the park like dominos. Elk, a natural and abundant prey item for the wolves, moved into the high country to escape the predators. This has allowed the plant life in surrounding valley streams to recover from overgrazing by the elk, creating beautiful riparian corridors similar to those seen by the first Europeans to enter the Yellowstone country. Further, the return of native streamside plant life has allowed the once suffering trout populations living in those streams to recover as well. Not only can Yellowstone visitors today catch glimpses of America's most notorious predator, but they can also enjoy a more fruitful ecosystem throughout the park. This seems to prove naturalist John Muir's thought: *When one tugs at a single thing in nature, he finds that it is attached to the rest of the world!*

The Chosen Four

Badlands National Park has similar wildlife reintroduction success stories. Four species have been brought back to the park since the Badlands was first set aside as a National Monument in 1939. With luck, visitors today may catch a glimpse of any one of these amazing critters.

American Bison

Also known as buffalo, bison once roamed the Badlands and the rest of the Great Plains freely with numbers estimated at 30 million. Due to over-hunting, bison were nearly eliminated by the early 1900's and extirpated (*entirely removed*) from North America. Efforts to regenerate the population from the few remaining animals began virtually immediately. Bison were returned to the Badlands in 1963 and have flourished - our population currently has nearly 1,000 members.

Rocky Mountain Bighorn Sheep

The first European explorers to reach the Badlands were greeted by a majestic animal - bighorn sheep. Similar to bison, westward expansion of our nation brought about over-hunting that led to the decline of this species. In 1964, the National Park Service reintroduced the Rocky Mountain bighorn to (then) Badlands National Monument. Successfully refilling its niche, today's Badlands sheep number over 100 in three distinct subpopulations and can be seen thriving on the rugged buttes of the park.

Black-footed Ferret

This small, nocturnal weasel was once an abundant predator living within the vast prairie dog towns of the west and feeding upon their residents. As ranches replaced dog towns, the ferret's population dwindled. In 1987, only 18 individuals remained, living on a remote Wyoming ranch. As one of the most endangered land mammals in the world, a captive breeding program was quickly begun. By 1992, ferrets were being released back into the wild and were returned to the Badlands just two yeas later. The current population has rebounded to approximately 300 through the Conata Basin/Badlands area.

Swift Fox

Populations of this small native fox declined due to mortalities from predator control, targeted at wolves and coyotes. This species is our park's newest restoration project, returned in the fall of 2004 after a hiatus of over 40 years. The population is now estimated at 60 to 80 individuals and will be augmented in the upcoming years. The largest percentage now lives in the Buffalo Gap National Grassland surrounding the park, successfully raising new pups.

The Decision Tree

After identifying a native species with potential for restoration, several criteria must be considered including:

- The ability of the species to prosper under the park's current conditions
- The public opinion of the local community and the nation
- Economic impacts to the park and its neighbors
- Environmental impacts to the local ecosystem

If park management, supported by science, determines a restoration to be feasible, they must next cooperate with other agencies and individuals to secure a source population and ensure that there will not be problems at the national, state, or local level. The work must also continue once a species is brought back. Researchers must determine survival rates, impacts on the ecosystem, and individual home ranges. They also decide if more individuals will need to be brought in to increase genetic health and how to prevent the past from re-occurring so that the species is not lost again.

An Ecological Crystal Ball

What does the future hold for the animals of the Badlands? Each year, several graduate students and wildlife biologists take on research projects supporting our restoration efforts. The genetic diversity of the animals are carefully monitored to insure a healthy population. New studies are revealing the inner workings of the mixed grass ecosystem, critical as only 2% of the native North American prairie remains. There are no other species planned for restoration at this time. Other extirpated animals not likely to be brought back to the Badlands include elk, grizzly bears, and wolves. Native to the area, these species would likely either cause too much harm to the economy of the region or simply could not be sustained by the relatively small size of the park. In our effort to restore the complete picture of the Badland, humans must now accept that this snapshot will remain incomplete.